

## CHAPTER V

### SUMMARY CONCLUSIONS AND RECOMMENDATIONS

#### 5.1. SUMMARY

The higher the level of performance, the more important it is to different running conditions. The closer these conditions are to the event-specific running conditions, the more effective is the work-out. The "art" of good coaching begins where the "science" of coaching finishes. Like a master chef, the good coach has his own secrets. The most important secret in cooking is the proper mixture of the ingredients. It is up to coaches to develop their own secrets, combining different running stimuli and thus getting faster running patterns from the athletes **Sebestyen, (1996)**.

The purpose of the study was to examine effect of high intensity and Tabata interval training on fat percentage in trunk, fat percentage in legs and fat percentage in arms as body composition,  $VO_2$ max as aerobic and fatigue index as anaerobic endurance school boys.

For the present study, to achieve this purpose, 45 school boys were selected from A.P.C. Veerabahu Matriculation Higher Secondary School, Thoothukudi, Tamil Nadu, India. The age of the subjects ranged between 14 and 15 years. The selected subjects were divided into two experimental groups namely High Intensity Interval Training Group (HITG), Tabata Interval Training Group (TITG) and Control Group (CG) with fifteen subjects ( $n=15$ ) in each. The two independent variables namely HITG and TITG on fat percentage in trunk, fat percentage in legs and fat percentage in arms as body composition,  $VO_2$ max as aerobic and fatigue index as anaerobic endurance were investigated. The duration of the training period

was six weeks and the number of sessions per week was confined to three. The data were collected prior to and immediately after the fourth, fifth and sixth week training period. However, CG was not exposed to any specific training but they participated in the regular scheduled work.

The collected data for the criterion variables were analysed by using analysis of variance for 3 x 4 factorial experiment [group (HITG, TITG and CG) x test (pre, fourth, fifth and sixth week)] with repeated measures on the last factor was used on selected fat percentage in trunk, legs and arms as body composition, VO<sub>2</sub>max as aerobic endurance and fatigue index as anaerobic endurance. Whenever the 'F' ratio for interaction was found to be significant, simple effect test was used as a post-hoc test to determine which of the group was significant and whenever the 'F' ratio for interaction was found to be significant in the simple effect test, Scheffe's test was used as a post-hoc test to determine which of the paired means were significant. In all the cases 0.05 level was fixed as significant level to test the hypothesis.

## **5.2. CONCLUSIONS**

The current study focuses on the effect of high intensity and Tabata interval training on body composition aerobic and anaerobic endurance of school boys.

1. 12 sessions of high intensity and Tabata interval training attenuation of fat percentage in trunk, legs and arms, elevated the VO<sub>2</sub>max level and augment of anaerobic endurance among school boys.
2. Due to the influence of first four weeks of high interval training and Tabata interval training enhanced the improvement on selected dependent variables

such as body composition, aerobic and anaerobic endurance and it keeps on increasing after the fifth and sixth week of training.

3. While comparing HIIT with TITG, TITG was better than that of HITG on fat percentage in trunk, legs and arms, aerobic and anaerobic endurance.
4. Based on the findings, the researcher concluded that high intensity and Tabata interval trainings are practical approaches for school boys in improving body composition, aerobic and anaerobic endurance.

### **5.3. RECOMMENDATIONS TO THE SOCIETY**

1. Since the high intensity and Tabata interval trainings are identified as the influential training, it is recommended to the coaches and physical education teachers to include them in their regular schedule of coaching and training programme to improve the body composition, aerobic and anaerobic endurance.
2. It is proposed that high intensity and Tabata interval training will be gradually introduced during the training sessions and correct the errors committed by the players to enhance the performance of the athletes.

### **5.4. RECOMMENDATIONS TO THE RESEARCHERS**

The results of the study brought out the following recommendations for further studies in this area.

1. Substantiate the findings in other training settings and for other physical activities/sports and games.
2. The intensity of the training and number of training sessions can be fixed according to the age and gender level of the subjects.

3. The present study thus needs to be strengthened or supported by more relevant research studies.